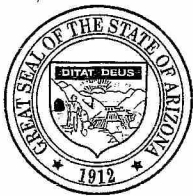


ATTACHMENT 7



Janice K. Brewer
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

1110 West Washington Street • Phoenix, Arizona 85007
(602) 771-2300 • www.azdeq.gov



Benjamin H. Grumbles
Director

April 7, 2010

Mr. Daniel Johnson, Manager
Mine Services & Environmental
Carlota Copper Company
P.O. Box 1009
Miami, AZ 85539

Re: Inspection of the Carlota Copper Company Mine, Salt Watershed. Inspection # 154580.

Dear Mr. Johnson:

Enclosed is a inspection report prepared by the Arizona Department of Environmental Quality (ADEQ) Water Quality Field Services Unit (WQFSU) concerning the inspection of the above referenced location on January 28, 2010. The inspection was conducted pursuant to the Arizona Revised Statutes (A.R.S.) §49-203(B)(1) *et. seq.*, and Arizona Administrative Code (A.A.C.) R18-9-110(A).

Please note the enclosed inspection report. Potential deficiencies were noted during the course of the inspection, so additional correspondence regarding the inspection may be forthcoming. ADEQ will provide monthly updates on the status of any agency action resulting from the inspection as required by A.R.S. § 41-1009 (H).

ADEQ is the State of Arizona Department authorized to enforce the provisions of the federal Clean Water Act (CWA), including the National Pollutant Discharge Elimination System (NPDES) and Arizona Pollutant Elimination System (AZPDES) Storm Water Permit.

If you have any questions regarding the above, please contact me at (602) 771-4519.

Sincerely,


Peter Jagow, EES
Water Quality Compliance
Field Services Unit

ADEQ Northern Regional Office
1801 W. Route 66, Suite 117, Flagstaff, AZ
86001
(928) 779-0313

Southern Regional Office
400 West Congress Street • Suite 433 • Tucson, AZ
85701
(520) 628-6733

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY DIVISION - COMPLIANCE SECTION
Field Services Unit

INSPECTION REPORT
CARLOTA COPPER COMPANY

Owner/Operator: Carlota Copper Company, a subsidiary of Quadra Mining Ltd.

AZPDES ID: AZCON-36085

Inspected by: Peter Jagow, Environmental Program Specialist (EPS), Water Quality Compliance Field Services Unit (WQCFSU)

Inspection No: 154580

Place ID: 1978

Inspection Date: January 28, 2010

Inspection Time: 1:00 pm

Industrial Activities: Mining and Construction

Accompanied by: Dan Johnson, Environmental Engineer, Carlota Copper Company

Watershed: Gila

Receiving Waters: Powers Gulch, Haunted Canyon, and Pinto Creek

Lat: 33° 23' 13.283"

Long: 110° 59' 15.217"

FACILITY DESCRIPTION

The Carlota Copper Company facility is located on the Tonto National Forest at the 2624 Forest Service Road #287 (AKA Pinto Valley Road) approximately 6 miles west of Miami, Arizona in the Globe-Miami Mining District, Pinal and Gila Counties. The facility has constructed an open pit copper mine and metallurgical processing facilities which include a lined valley-fill leach pad and a solvent extraction/electrowinning plant for cathode copper production. In addition, the facility has constructed basins, berms, dams, diversion channels, earthen embankment, haul roads, shops, electrical transmission and distribution lines, well fields, pipelines, ponds, soil

stockpiles, spillways, and fencing at this project site.

During the inspection, Pinto Creek was conveying its flow into the Pinto Creek Diversion Channel (PCDC). An access haul road has been constructed adjacent to the PCDC between the east slope of the mining pit and the PCDC. The PCDC has been constructed to bypass and divert flows around the east side of the facility's pit. An intercepting sub-surface grout cut-off pit wall has been installed across the entrance and in front of the PCDC to prevent seepage into the excavation pit and back up the subsurface flow of Pinto Creek in order to establish a wetland. In addition, the facility has placed alluvium into the PCDC per the U.S. Army Corps of Engineers 404 permit requirement. See enclosed copies of the Sediment and Erosion Control Plan Pinto Creek Drainage Map and Photo Log.

During the inspection, Powers Gulch was conveying its flow through an inlet/outlet control pipe structure (culvert) into the Powers Gulch Diversion Channel (PGDC). (It was not clear during the inspection whether the PGDC or adjacent structures were fully constructed.) An access haul road has been constructed adjacent to the last segment of the PGDC. The PGDC has been constructed to divert flows around the west side of a constructed leach pad in the vicinity of the Main PLS Embankment. The Main PLS Embankment is an earthen embankment located in the downstream end of Powers Gulch. The lined Main PLS Embankment Spillway is estimated to be 90 feet in height. The Main PLS Embankment Emergency Spillway is lined and is located adjacent to the east side of the PGDC. A lined Underdrain Collection Pond is located downstream and at the toe of the Main PLS Embankment. A lined flume conveys flows from the Underdrain Collection Pond into an unlined Limestone (Process) Pond which has been constructed within the Powers Gulch channel. A (yellow) ground water monitoring well and a series of Sediment Basins and Rock Check Dams have been installed immediately down stream of the Limestone (Process) Pond in the Powers Gulch channel. See enclosed copies of the Sediment and Erosion Control Plan Powers Gulch Drainage Map and Photo Log.

Powers Gulch is an ephemeral stream and serves as a tributary to Haunted Canyon. Haunted Canyon, a perennial stream, flows northeast and serves as a tributary to Pinto Creek. Powers Gulch, Haunted Canyon, and Pinto Creek serve as the receiving waters for this construction project. See enclosed Site Maps and Topographic Maps.

WATER QUALITY CERTIFICATION & PERMIT COMPLIANCE BACKGROUND

On January 22, 2009, ADEQ modified and extended the Clean Water Act 401 Water Quality Certification for the Carlota Mine Project issued on August 15, 1996.

On January 12, 2009, the United States Supreme Court denied the Carlota Copper Company petition to review a decision by the Ninth Circuit Court of Appeals which vacated the Clean Water Act National Pollutant Discharge Elimination System (NPDES) permit issued by the U.S. EPA to the Carlota Copper Company.

On December 10, 2008, ADEQ authorized the Carlota Copper Company to discharge storm

water from construction areas pursuant to the AZPDES Construction Permit No. AZG2008-001.

On October 10, 2008, ADEQ issued and granted an amendment to Aquifer Protection Permit (APP) No. P-102640, authorizing the Carlota Copper Company to operate the Carlota Copper Project.

On January 23, 2001, the EPA authorized the Carlota Copper Company to discharge storm water pursuant to the NPDES Multi-Sector General Permit (MSGP). In December, 2002, EPA delegated the NPDES program to Arizona. Upon delegation, all EPA issued permit were transferred to ADEQ. Although the MSGP 2000 expired in October 30, 2005, it has been administratively continued until Arizona issues its new MSGP permit.

FACILITY RAINFALL DATA & SAMPLED SURFACE WATER ANALYTICAL RESULTS

At the time of the inspection, the facility submitted to the WQCFSU its most recent available storm water inspection reports and monitoring results of both Pinto Creek and Powers Gulch which are applicable to their AZPDES Construction General Permit. See enclosed copies of the facility's February 17, 2009 and July, 1, 2009 SWPPP Inspection Forms and analytical results for surface water samples collected from Powers Gulch and Pinto Creek by the Carlota Copper Company.

Dan Johnson, Environmental Engineer, Carlota Copper Company indicated the facility collected representative surface water samples from Pinto Creek and Powers Gulch during the recent large storm event period of January 21 through January 23. Johnson stated Carlota's two separate on-site rain gauges recorded 6.8 and 7 inches, respectively, for the 48 hour period from January 21 through January 23, 2010. . However, he stated that the analytical results for the surface water samples were not available to the facility from their laboratory at the time of the inspection. The WQFSU requested the facility submit the analytical results to the WQFSU upon the facility's receipt of their analytical results from their laboratory. [Note: According to the "Precipitation-Frequency Atlas of the United States" NOAA Atlas 14, Volume 1, Version 4 NOAA, National Weather Service, Silver Spring, Maryland, 2006, the 100-year/48 hour storm event for Carlota's location is 7.31 inches.]

On February 22, 2010, the Carlota Copper Company sent via e-mail the following documentation to the WQCFSU: The facility's precipitation readings from two on-site weather stations during the large storm event period, SWPPP Inspection Forms, Field Measurement Forms, and analytical results for surface water samples collected from Powers Gulch on January 22, 2010 and from Pinto Creek on January 21st and 25th of 2010. The facility also provided analytical results for ponded water which was sampled on January 25, 2010, although the location or identification of the ponded water was not clear from the submittal. Furthermore, the e-mail included a Routine SWPPP Inspection Report dated January 27, 2010, which indicated that the Haunted Canyon Wellfield Project Area was inaccessible due to high flows. See enclosed documentation provided to the WQCFSU on February 22, 2010.

PINTO CREEK FIELD OBSERVATIONS

The PCDC and Pinto Creek were inspected by the WQCFSU on January 28, 2010. See enclosed copies of the Sediment and Erosion Control Plan Pinto Creek Drainage Map and Photo Log. The WQCFSU observed evidence of erosion on the exposed steep, terraced pit wall slopes located adjacent to and along the east side of the PCDC. See enclosed Photos # 5 through # 12. The WQCFSU also observed evidence of numerous rills and discharged rock and sediment from the terraced slopes of the pit wall into the PCDC. See enclosed Photos # 9 through # 11. The WQCFSU observed evidence of damage to the east bank interlocking tiles and channel liner within the PCDC. See enclosed Photos # 5 and # 7 through # 9. The WQCFSU also observed a subsurface pipe installed under the PCDC and haul road to drain the exposed saturated terraced slopes into the excavation pit, but this appeared to be an ineffective method of controlling the slope stability from erosion or discharge. The WQCFSU noted that the unstabilized terraced pit wall slopes were an ineffective Best Management Practice (e.g., an inadequate erosion control) to prevent pollutants (e.g., rock and sediment) from being dislodged and discharged into the PCDC.

POWERS GULCH FIELD OBSERVATIONS

On January 28, 2010, the WQCFSU inspected the PGDC, the Orme Dam Structure and up-gradient unlined pond (surface impoundment), the Main PLS Embankment slopes and lined Emergency Spillway Structure. See enclosed copies of the Sediment and Erosion Control Plan Powers Gulch Drainage Map and Photo Log.

The WQCFSU observed evidence of discharged stripped/treated water (e.g., barren water) in an unlined pond (surface impoundment) located up-gradient and adjacent to the Orme Dam Structure. See enclosed Photos # 18 and # 19. Dan Johnson explained that during the recent storm event, the facility took a precautionary measure to pump water from the Powers Gulch Leach Pad to the Raffinate Pond and SW Pond and then piped the stripped/treated water into the previously referenced unlined surface impoundment located up-gradient of the Orme Dam Structure. See enclosed Photos # 18 and # 19. In addition, Dan Johnson indicated the barren water was sampled and analyzed for metals and pH. The results were non-detect for metals with the exception for zinc (unknown) and copper of 0.0077mg/l, and a pH greater than 4 and less than 5. Dan Johnson stated that during the day of the inspection, the water from the unlined surface impoundment located up-gradient of the Orme Dam Structure was being piped back on to the Powers Gulch Leach Pad. The unlined surface impoundment was not identified by Carlota as a discharging facility in its APP application, and was not included in the permit issued by ADEQ.

The WQCFSU observed evidence of rills on bermed earthen fill material located on the surface of the lined Main PLS Embankment Emergency Spillway Structure. See enclosed Photos # 20 through # 24. However, the WQCFSU observed no visual evidence of discharges from the PGDC, the slopes of the Main PLS Embankment and the Emergency Spillway into Powers Gulch. Based on the observations and statements of Mr. Johnson, it appears that Carlota's precautionary measure of pumping water from the Powers Gulch Leach Pad was done to avoid a failure of the Main PLS Embankment Emergency Spillway Structure. See enclosed Photos # 25 through # 28.

See enclosed March 8, 2010 Performance Level Report- Carlota APP (P102640) e-mail sent by Dan Johnson to the ADEQ Data Unit and APP & Drywell Unit.

COMPLIANCE SUMMARY

The discharge of pollutants pumped from the Powers Gulch Leach Pad, into the unlined surface impoundment is not authorized under the facility's Aquifer Protection Permit (APP).

The facility's structural BMPs (i.e. terraced slopes and subsurface pipes to prevent slope saturation) designed to divert flows from exposed soils, store flows, or otherwise limit run-off and the discharge of pollutants from exposed areas of the site were ineffective to prevent discharges to the PCDC. The facility also failed to design and implement a combination of erosion and sediment control BMPs to keep sediment in place and to capture sediment to the extent practicable before it leaves the site. In the absence of effective BMPs, the facility is not authorized to add pollutants (e.g., discharged rock and sediment) from eroding, saturated and steep slopes of the pit wall into the PCDC.

ANALYTICAL RESULTS FOR SAMPLES TAKEN BY CARLOTA COPPER COMPANY BETWEEN JULY 1, 2009 AND FEBRUARY 17, 2010

PINTO CREEK

Date	Site	Hardness (as CaCO ₃) (mg/L)	Result (ug/L)	SWQS ¹ for copper, dissolved [A&Ww acute (ug/L)]
2/17/09	PCS-1	39	79.2	5.53
2/17/09	PCS-2	83	56.4	11.28
7/01/09	PCS-1	62	376	8.57
7/01/09	PCS-2	1450	51.1	49.62
				(at 400 mg/l hardness)
1/21/10	PCS-1	22	69.7	3.23
1/21/10	PCS-2	55	52.8	7.65
1/25/10	PCS-1	50	126	6.99
1/25/10	PCS-2	110	106	14.7

POWERS GULCH

Date	Site	Hardness (as CaCO ₃) (mg/L)	Result (ug/L)	SWQS ¹ for copper, dissolved [A&We acute (ug/L)]
2/17/09	PG-1	15	13	3.89
2/17/09	PG-2	18	9.5	4.62
1/22/10	PG-1	14	36.8	3.65
1/22/10	PG-2	19	35.2	4.86

¹SWQS = Surface Water Quality Standard

PHOTOLOG
Carlota Copper Company
Pinto Creek
January 28, 2009

1. Pinto Creek upstream of the PCDC and PCS-1 sample point, facing southeast.
2. Pinto Creek upstream of the PCDC showing the west berm installed from the PCDC to the original Pinto Creek channel, facing southwest.
3. The entrance/mouth of the PCDC, facing east.
4. The PCDC downstream of the entrance/mouth of the PCDC, facing north.
5. Damage to the interlocking tiles of the PCDC and the eroding slopes of the pit wall, facing north.
6. Evidence of rills on the terraced slopes of the pit wall located adjacent to the PCDC, facing southeast.
7. Damage to the interlocking tiles and channel liner of the PCDC, facing southeast.
8. Evidence of rills on the terraced slopes of the pit wall located adjacent to the PCDC, facing southeast.
9. Evidence of rills on the terraced slopes of the pit wall located adjacent to the PCDC, facing northeast.
10. Close up of rills on the pit wall located adjacent to the PCDC, facing east.
11. Close up of rills on the pit wall located adjacent to the PCDC, facing east.
12. Close up of the pipe installed to drain saturated slopes under the PCDC and haul road into the pit, facing northeast.
13. Close up of the pipe installed to drain saturated slopes under the PCDC and haul road into the pit, facing west.
14. The 7 culvert haul road Pinto creek crossing and PCS-2 sample point, facing west.

PHOTOLOG
Carlota Copper Company
Powers Gulch
January 28, 2010

15. Powers Gulch upstream of the PGDC inlet/outlet control pipe structure, facing south. The PG-1 sample point is located upstream of the OGDC inlet/outlet control structure.
16. Powers Gulch flow from the inlet/outlet control pipe structure into the PGDC, facing north.
17. A close up of a rock armored drainage along the west slope of the PGDC, facing west.
18. Evidence of the piped stripped/treated (e.g., barren water) in an unlined pond (surface impoundment) located up-gradient of the Orme Dam Structure, facing northeast.
19. Close up of the piped stripped/treated (e.g., barren water) in an unlined pond (surface impoundment) located up-gradient of the Orme Dam Structure, facing northeast.
20. Panorama of the lined Main PLS Embankment Emergency Spillway, facing south.
21. Panorama of the lined Main PLS Embankment Emergency Spillway, facing south.
22. Panorama of the lined Main PLS Embankment Emergency Spillway, facing south.
23. Panorama of the lined Main PLS Embankment Emergency Spillway, facing south.
24. Panorama of the lined Main PLS Embankment Emergency Spillway, facing south.
25. The Main PLS Embankment located adjacent to and down-gradient of the Powers Gulch Leach Pad, southeast.
26. The lined Underdrain Collection Pond located down-gradient of the Main PSL Embankment, facing east.
27. The last segment of the PGDC leading into the Powers Gulch channel, facing northeast.
28. The last series of Rock Check Dams in the Powers Gulch channel, facing northeast. The PG-2 sample point is located immediately down stream of the last Rock Check Dam in Powers Gulch.

